

DOCUMENT RESUME

ED 424 709

EC 306 797

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TITLE Differentiation: Definition and Description for Gifted and Talented.
INSTITUTION National Research Center on the Gifted and Talented, Storrs, CT.
SPONS AGENCY Office of Educational Research and Improvement (ED), Washington, DC.
PUB DATE 1998-00-00
NOTE 5p.
AVAILABLE FROM National Research Center on the Gifted and Talented, University of Connecticut, 362 Fairfield Road, U-7, Storrs, CT 06269-2007; Tel: 860-486-4676; Fax: 860-486-2900.
PUB TYPE Guides - Non-Classroom (055)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Classroom Environment; Cognitive Development; Cognitive Style; *Curriculum Design; Elementary Secondary Education; *Enrichment Activities; *Gifted; *Talent; Teaching Methods
IDENTIFIERS *Differentiated Curriculum (Gifted)

ABSTRACT

This paper defines and discusses the term "differentiation" as it is applied in gifted and talented education programs. It begins by describing three components that are most notably associated with differentiation: content (what is being taught); process (how it is being taught); and product (tangible results produced that are based on students' interests and abilities). Goals related to these components and additional dimensions of differentiation include: (1) put more depth into curriculum through organizing the curriculum concepts and structure of knowledge; (2) use many instructional techniques and materials to enhance and motivate learning styles of students; (3) improve the cognitive development and the students' ability to express themselves; (4) enhance the comfort of the classroom by changing grouping formats and physical areas of the environment; and (5) use artistic modification to share personal knowledge of topics related to curriculum as well as personal interests, collections, hobbies, and enthusiasm about issues surrounding content area. The paper closes with a description of what a differentiated classroom resembles. (Contains 14 references.) (CR)

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Differentiation: Definition and Description for Gifted and Talented

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Educational terms often become buzzwords communicated through various media and professional conversations. Within these dialogues, misconception replaces the intended meaning that results in confusion or lack of implementation for necessary strategies that benefit high ability students.

Differentiation cannot become another buzzword! Rather, it must be accurately defined and described so that pedagogical strategies and classroom environments are appropriate for gifted and talented students.

Differentiation Defined . . .

Three components that are most notably associated with differentiation are: content--what is being taught; process--how it is being taught; and product--tangible results produced based on students' interests and abilities. In the last few years, researchers have added to the content, process, and product definition by addressing the teacher's role, evaluation methods, and the goals of differentiation.

Tomlinson (1995) emphasizes that in differentiating the curriculum, teachers are not dispensers of knowledge but organizers of learning opportunities. To provide optimal learning opportunities the classroom environment must be changed to accommodate the interests and abilities of the learner. Another dimension included in classroom differentiation involves assessing student performance. Riley (1997) states that when differentiating, appropriate evaluation methods should be utilized including rubrics, portfolios, and checklists based on the products created.

Renzulli's (1997) Five Dimensions of Differentiation include the aspects previously addressed, while defining goals of what each dimension should include for a truly differentiated approach. Goals related to the five dimensions are:

content-

put more depth into the curriculum through organizing the

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- curriculum concepts and structure of knowledge;
- process-
 - use many instructional techniques and materials to enhance and motivate learning styles of students;
- product-
 - improve the cognitive development and the students' ability to express themselves;
- classroom-
 - enhance the comfort by changing grouping formats and physical area of environment;
- teacher-
 - use artistic modification to share personal knowledge of topics related to curriculum as well as personal interests, collections, hobbies, and enthusiasm about issues surrounding content area.

Differentiation Described . . .

The following description paints a picture of what a differentiated classroom resembles.

Within the content area, representative topics are explored and webbed, with open-ended questions that probe into a particular field of knowledge (Renzulli, 1997). For example, under the study of Health, a representative topic would be childhood obesity explored by the discussion of whether obesity is a result of genetic or dietary factors. This type of content exploration supports Slocumb and Monaco (1986) who state that, "Curriculum must allow for students to discover the bridges between ideas and fields of study and the paths to new learning" (p. 32).

Pedagogical strategies or processes used to stimulate thinking would include but not be limited to problem-based learning, Socratic method, simulations, independent study (both guided and unguided), and higher-level thinking questions. According to Maker (1982), higher-level thinking questions are necessary for critical thinking skills to be grasped by students to respond to curriculum content at higher levels. These processes are illustrated in classrooms where Future Problem Solving activities (researching, brainstorming, identifying an underlying problem, and developing an action plan) are used or where the training of how-to skills is utilized to motivate independent investigations of real world problems.

Products associated with a differentiated approach reflect both the learners' expression and the applied skills of a field of study. These products can be achieved through exposure to learning opportunities developed within the classroom or through the external environment (Passow, 1982) such as agencies, museums, TV, radio, community organizations, and mentorships or apprenticeships. A student's product related to childhood obesity may be a newly designed diet for children developed with the aid of hospital dieticians. Another would be an exercise program that takes into consideration the genetic predisposition of children generated with the knowledge and assistance of an exercise physiologist.

When differentiation is occurring in a classroom environment there is a combination of interest and learning centers, study areas, computer stations, and work areas for artistic and scientific discoveries. Some students may need the use of other school learning areas (e.g., library, gym, auditorium, lab) if the topic being investigated requires additional resources or environments that allow for freedom of movement.

Most importantly, the teacher extends him/herself by becoming part of the learning exploration through direct personal experiences, an opinion or belief that sparks a curiosity or confrontation with knowledge, or by modeling the love of learning as the process unravels.

Passow (1982) states that differentiation is essential for gifted students to develop their unique gifts and talents. "Teachers responsible for these students must have an appropriate base of knowledge and skills to meet these needs, and should enjoy working with these students" (Coleman & Gallagher, 1995, p. 32).

Educators of the gifted and talented have the task of developing and utilizing the five dimensions of differentiation in a consistent and progressive manner to truly address the needs of highly able learners and direct them into choices that challenge their potential. Differentiation is the necessary strategy by which gifted and talented children "realize their contribution to self and society" (Marland, 1971, p. ix).

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